ART. XX.—Catalogue of the Marine Shells of Victoria.

PART III.

BY G. B. PRITCHARD AND J. H. GATLIFF.

[Read 12th October, 1899.]

In December, 1897, we contributed Part I. of the present catalogue, which included 83 species; and in December, 1898, Part II., which included 58 species; the present part includes 77 additional species, comprising the following families:—Pleurotomidæ, Conidæ, Strombidæ, Cypræidæ, Cassididæ, Naticidæ, Hipponycidæ, Capulidæ, Turritellidæ, and Vermetidæ. This brings the number of species we have already dealt with to 218.

Family Pleurotomidæ.

Genus Drillia, Gray, 1838.

Drillia Harpularia, Desmoulins.

Pleurotoma harpula, Valenciennes, m.s. (non Brocchi).

Pleurotoma harpula, Kiener. Icon. Coq. Viv., p. 58, pl. 18, f. 3.

Drillia harpularia, Desmoulins. Actes Soc. Linn. Bordeaux, vol. xii., p. 162.

1843. Pleurotoma harpularia, Reeve. Conch. Icon., vol. i., pl. 15, f. 124.

1884. Drillia harpularia, Tryon. Man. Conch., vol. vi., p. 193, pl. 14, f. 99.

1887. Pleurotoma (Crassispira) harpularia, Weinkauff. Conch. Cab. (ed. Küster) vol. iv., p. 97, No. 115, pl. 21, f. 2, a, b.

Hab.—Portland.

Obs.—This species has hitherto been somewhat rare amongst Victorian collections.

DRILLIA QUOYI, Desmoulins.

Pleurotoma monile, Valenciennes (non Brocchi). Icon. Coq. Viv., Mon. Pleurotoma, p. 52, pl. 15, f. 3.

- 1842. Pleurotoma quoyi, Desmoulins. Actes Soc. Linn. Bordeaux, p. 61.
- 1846. Pleurotoma quoyi, Reeve. Conch. Icon., vol. i., pl. 16, f. 137.
- 1876. Pleurotoma philipineri, T. Woods. P.R.S. Tas., p. 136.
- 1884. Surcula quoyi, Tryon. Man. Conch., vol. vi., p. 242, pl. 7, f. 95.
- 1884. Clavatula (Perrona) monile, Tryon. *Id.*, p. 232, pl. 7, f. 96.
- 1884. Pleurotoma philipineri, Tryon. *Id.*, p. 167, pl. 34, f. 82.
- 1886. Pleurotoma (Drillia) quoyi, Watson. Chall. Zool., vol. xv., p. 304.
- 1887. Pleurotoma (Surcula) quoyi, Weinkauff. Conch. Cab. (ed. Küster) p. 101, sp. 121, pl. 22, f. 2.
- 1896. Surcula quoyi, Sowerby. P. Mal. S. Lond., p. 24. Hab.—Western Port (dredged 5 fathoms, C. J. Gabriel); Apollo Bay, and Warrnambool (G. B. P.).

Drillia Beraudiana, Crosse.

- 1863. Drillia beraudiana, Crosse. Jour. d. Conch., p. 88, pl. 1, f. 6.
- 1884. Drillia angasi, Tryon (non Crosse). Man. Conch., vol. vi., p. 187, pl. 9, f. 36.
- 1887. Pleurotoma (Crassispira) beraudiana, Weinkauff. Conch. Cab. (ed. Küster), p. 95, No. 113, pl. 20, f. 7, 9.

Hab.—Flinders; San Remo; dredged off Phillip Island, Western Port, in about 5 fathoms (C. J. Gabriel); Port Phillip; Puebla coast.

Drillia ÆMULA, Angas.

- Drillia aemula, Angas. P.Z.S. Lond., p. 36, pl. 5,
 f. 9.
- 1880. Drillia æmula, Hutton. Man. N.Z. Moll., p. 44.
- 1884. Drillia trailli, Tryon (non Hutton). Man. Conch., vol. vi., p. 206, pl. 12, f. 37.
- 1887. Pleurotoma (Drillia) æmula, Weinkauff. Conch. Cab. (ed. Küster), p. 221, No. 259, pl. 41, f. 9.

Hab.—Portland (Mrs. A. F. Kenyon), one specimen only obtained.

Obs.—The description of D. trailli, Hutton, Man. N.Z. Moll., p. 42, is a very brief one, but Tryon in the Manual of Conchology, vol. vi., p. 206, states it is the same as D. æmula, and on plate 34, fig. 90 he represents Hutton's species, which, however, differs materially in dimensions and in its sculpture, and on these facts we cannot accept it as being the same.

DRILLIA MINUTA, T. Woods.

1876. Drillia minuta, T. Woods. P.R.S. Tas., p. 8, No. 15.

1884. Drillia minuta, Tryon. Man. Conch., vol. vi., p. 210, pl. 34, f. 93.

Hab.—Western Port.

DRILLIA CRENULARIS, Lamarck.

1822. Pleurotoma crenularis, Lamarck. Anim. S. Vert., vol. vii., p. 92.

1839. Pleurotoma crenularis, Lamarck. Anim. S. Vert. (Deshayes and Edwards, 3rd ed.), vol. iii., p. 624, No. 7.

1843. Pleurotoma crenularis, Reeve. Conch. Icon., vol. i., pl. 7, f. 54.

1884. Drillia crenularis, Tryon. Man. Conch., vol. vi., p. 178, pl. 10, f. 64, and pl. 32, f. 38.

1887. Drillia crenularis, Weinkauff. Conch. Cab. (ed. Küster), p. 47, No. 48, pl. 10, f. 6.

Hab.—Portland (Mrs. A. F. Kenyon), one specimen only obtained.

Obs.—This is a very fine species, the specimen found measuring 37 mm. in length.

DRILLIA TELESCOPIALIS, Verco.

1896. Drillia telescopialis, Verco. T.R.S. S.A., p. 222, pl. 7, f. 1, 1*a*, 1*b*.

Hab.—Portsea (T. S. Hall).

DRILLIA HOWITTI, Pritchard and Gatliff.

1899.—Drillia howitti, Pritchard and Gatliff. P.R.S. Vic., vol. xii., n.s., pt. i., p. 101, pl. 8, f. 2.

Hab.—Gippsland coast.

Obs.—The type of this species is in Mr. Gatliff's private collection.

DRILLIA GABRIELI, Pritchard and Gatliff.

1899. Drillia gabrieli, Pritchard and Gatliff. P.R.S. Vic., vol. xii., n.s., pt. i., p. 100, pl. 8, f. 1.

Hab.—Dredged alive in about five fathoms off Phillip Island, Western Port (C. J. Gabriel).

Obs.—The type of this species is in Mr. Gatliff's private collection.

Genus Mangilia, Risso, em. 1826 (Mangelia).

MANGILIA PICTA, Adams and Angas.

1863. Mangelia picta, Adams and Angas. P.Z.S. Lond., p. 419, pl. 37, f. 7.

1875. Mangelia meredithiæ, T. Woods. P.R.S. Tas., p. 142.

1878. Drillia tæniata, T. Woods. Id., p. 36.

1884. Mangilia picta, Tryon. Man. Conch., vol. vi., p. 256, pl. 22, f. 72.

1896. Mangilia picta, Sowerby. P. Mal. S. Lond., vol. ii., p. 29.

Hab.—Coast generally.

Obs.—The type has a broad brown band on the body whorl, covering the upper half, and occupying almost the whole of the other whorls, this style of marking is seldom met with on our shells, the usual one being an encircling row of colour dashes immediately below the suture, between the ribs. We have specimens 18 mm. in length.

MANGILIA MITRALIS, Adams and Angas.

1863. Bela mitralis, Adams and Angas. P.Z.S. Lond., p. 420, No. 8.

1863. Bela australis, Adams and Angas. Id., No. 9.

1878. Mangelia alternata, T. Woods. P.R.S. Tas., p. 39.

1896. Mangilia australis, Sowerby. P. Mal. S. Lond., vol. ii., p. 31.

Hab.—Coast generally.

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Obs.—The type of M. alternata is in the National Museum, Melbourne. We agree with Sowerby in uniting the two species of Adams and Angas, as we have a full series connecting them, but we give precedence to the name first mentioned by the describers. We are not altogether satisfied as to the above generic location, for it seems to us neither a typical Bela, nor a Mangilia, but in some respects recalls Daphnella, but even this is not wholly satisfactory; therefore, pending further consideration we refer to it as above.

Mangilia vincentina, Crosse and Fischer.

1865. Mangelia? vincentina, Crosse and Fischer. Jour. d. Conch., p. 422, pl. 11, f. 6.

1884. Daphnella vincentina, Tryon. Man. Conch., vol. vi., p. 311, pl. 17, f. 91.

1896. Mangilia vincentina, Sowerby. P. Mal. S. Lond., vol. ii., p. 30.

Hab.—Port Phillip; Western Port; Portland.

Mangilia anomala, Angas.

1877. Purpura (Cronia) anomala, Angas. P.Z.S. Lond., p. 34, pl. 5, f. 1.

1880. Murex (Ocinebra) anomala, Tryon. Man. Conch., vol. ii., pp. 121 and 180, pl. 36, f. 422.

1884. Cronia anomala, Tryon. Id., vol. vi., p. 318.

1890. Mangilia anomala, Tate. P.L.S., N.S.W., vol. v., p. 131.

1896. Mangilia anomala, Sowerby. P. Mal. S. Lond., vol. ii., p. 31.

Hab.—Port Phillip; Western Port; Portland; and coast generally.

Obs.—As above indicated Tryon does not regard this shell as a Mangilia, and states on p. 318 that he cannot agree with those who regard it as such.

Mangilia adcocki, Sowerby.

1863. Mangelia bella, Adams and Angas (non Hinds). P.Z.S. Lond., p. 419, pl. 37, f. 6.

1877. Cithara gracillima, T. Woods, m.s.

1884. Mangilia boakei, Tryon (non Nevill). Man. Conch., vol. vi., p. 270, pl. 25, f. 36.

1896. Mangilia adcocki, Sowerby. P. Mal. S. Lond., vol. ii., p. 29, pl. 3, f. 18.

Hab.—Western Port; Port Phillip; and Puebla coast.

Obs.—A shell named C. gracillima, T. Woods, has been set out in the National Museum, Melbourne, since 1877, but we have been unable to find any published description of it. We have a variety of this shell slightly longer and narrower than the type, of a uniform white excepting at the apex which is brown; and we have another form which is more robust, the whorls more convex, and the costæ are more strongly developed.

MANGILIA TASMANICA, T. Woods.

1875. Cithara tasmanica, T. Woods. P.R.S. Tas., p. 145.

1877. Mangelia jacksoniensis, Angas. P.Z.S. Lond., p. 37, pl. 5, f. 10.

1884. Daphnella jacksonensis, Tryon. Man. Conch., vol. vi., p. 311, pl. 22, f. 73.

Hab.—Port Fairy (Rev. T. Whan).

Obs.—This species is nearly related to M. mitralis, Adams and Angas, but is much narrower in form and more turreted.

MANGILIA ALUCINANS, Sowerby.

1896. Mangilia alucinans, Sowerby. P. Mal. S. Lond., vol. ii., p. 29, pl. 3, f. 12.

Hab.—Port Phillip; Western Port; Portland; and coast generally.

Obs.—This shell has usually hitherto been known as M. lineata, Reeve, but we have carefully referred to his original description and figure, and it is not that species.

MANGILIA FLACCIDA, Pritchard and Gatliff.

1899. Mangilia flaccida, Pritchard and Gatliff. P.R.S. Vic., vol. xii., n.s., pt. 1, p. 102, pl. 8, f. 3, 4.

Hab.—San Remo, Western Port.

Obs.—The type of this species is in Mr. Gatliff's private collection. This species is in all probability the one that has on several occasions been confused with Mangilia pura, Reeve.

Genus Cithara, Schumacher, 1817 (Cythara).

CITHARA COMPTA, Adams and Angas.

1863. Cithara compta, Adams and Angas. P.Z.S. Lond., p. 419, pl. 37, f. 5.

1876. Daphnella varix, T. Woods. P.R.S. Tas., p. 10.

1884. Daphnella compta, Tryon. Man. Conch., vol. vi., p. 306, pl. 25, f. 49.

1896. Cythara compta, Sowerby. P. Mal. S. Lond., vol. ii., p. 31.

Hab.—Flinders; San Remo; Sorrento.

CITHARA COGNATA, Pritchard and Gatliff.

1899. Cithara cognata, Pritchard and Gatliff. P.R.S. Vic., vol. xii., n.s., pt. i., p. 103, pl. 8, f. 5.

Hab.—Dredged alive in about five fathoms off Phillip Island, Western Port (C. J. Gabriel).

Obs.—The type of this species is in Mr. Gatliff's private collection.

Genus Clathurella, Carpenter, 1857.

CLATHURELLA TINCTA, Reeve.

1846. Pleurotoma tincta, Reeve. Conch. Icon., vol. i., pl. 38, f. 347.

1846. Pleurotoma albifuniculata, Reeve. Id., f. 350.

1876. Clathurella rubroguttata, H. Adams. P.Z.S. Lond., p. 14, pl. 3, f. 25.

1877. Mangelia trachys, T. Woods. T.R.S., Vic., vol. xiv., p. 57.

1884. Clathurella tineta, Tryon. Man. Conch., vol. vi., p. 292, pl. 16, f. 75, 76, and pl. 17, f. 96.

1896. Clathurella tincta, Sowerby. P. Mal. S. Lond., vol. ii. p. 28.

Hab.—Port Phillip; Western Port; Polwarth coast.

Obs.—The type of M. trachys, T. Woods, is in the National Museum, Melbourne, and is recorded from Brighton.

CLATHURELLA MODESTA, Angas.

1877. Clathurella modesta, Angas. P.Z.S. Lond., p. 38, pl. 5, f. 15.

1884. Clathurella modesta, Tryon. Man. Conch., vol. vi., p. 285, pl. 17, f. 92.

1896. Clathurella modesta, Sowerby. P. Mal. S. Lond., vol. ii., p. 28.

Hab.—Port Phillip; Western Port.

CLATHURELLA LALLEMANTIANA, Crosse and Fischer.

1865. Clathurella lallemantiana, Crosse and Fischer. Jour. d. Conch., p. 423, pl. 2, f. 5.

1875. Mangelia immaculata, T. Woods. P.R.S. Tas., p. 142.

1876. Drillia incrusta, T. Woods. Id., p. 136.

1884. Clathurella letourneuxiana, var. lallemantiana, Tryon. Man. Conch., vol. vi., p. 286, pl. 17, f. 86.

1896. Clathurella lallemantiana, Sowerby. P. Mal. S. Lond., vol. ii., p. 28.

Hab.—Port Phillip; Western Port.

CLATHURELLA LETOURNEUXIANA, Crosse and Fischer.

1865. Clathurella letourneuxiana, Crosse and Fischer. Jour. d. Conch., p. 425, pl. 11, f. 7.

Mangelia letourneuxiana, T. Woods. P.R.S. Tas.,
 p. 28.

1884. Clathurella letourneuxiana, Tryon. Man. Conch., vol. vi., p. 286, pl. 17, f. 87.

Hab.—Port Phillip; Western Port.

Obs.—Hutton in his Catalogue of Marine Mollusca, 1873, cites Daphnella letourneuxiana, Crosse, but in his subsequent Manual of New Zealand Mollusca, 1880, it appears from the appendix, page 218, that he has mistaken the species and its correct name is cited by him as Defranchia luteo-fasciata, Reeve.

CLATHURELLA PHILOMENA, T. Woods.

1875. Clathurella philomena, T. Woods. P.R.S. Tas., p. 141.

1876. Siphonalia pulchra, T. Woods. Id., p. 139.

1880. Clathurella crassina, Angas. P.Z.S. Lond., p. 416, pl. 40, f. 6.

1896. Clathurella parvula, Sowerby (non Reeve). P. Mal. S. Lond., vol. ii., p. 28.

Hab.—Port Phillip, Western Port; Portland (C. M. Maplestone); dredged off Phillip Island, Western Port, about 5 fathoms (C. J. Gabriel).

Obs.—The above species is fairly abundant in Port Phillip and Western Port. After carefully considering the meagre description and figure of Pleurotoma parvula, Reeve, Conch. Icon., vol. i., pl. 28, f. 254, and being unable to see the actual type we cannot agree with the conclusions of Sowerby in Proc. Mal. S. Lond., vol. ii., p. 28; our shell is more nearly related to Clavatula spurca, Hinds, and still closer to C. rava, Hinds.

The specimens dredged, above alluded to, are of greater length than usual, and the upper portion of the body whorl is not so angulate.

T. Woods himself acknowledges Siphonalia pulchra as an immature state of Clathurella philomena, in the Proceedings of the Royal Society of Tasmania for 1879, amongst some other corrections in a note to his paper on some Tasmanian Trochide.

CLATHURELLA KYMATOËSSA, Watson.

1886. Drillia kymatoëssa, Watson. Chall. Zool., vol. xv., p. 309, No. 39, pl. 26, f. 5.

Hab.—Off East Moncoeur Island, Bass Strait (Challenger).

Obs.—In general habit and sculpture this shell is very nearly related to C. philomena, T. Woods, and this is especially noticeable when it is compared with the large specimens of that species dredged in Western Port, probably a connecting series may be established.

CLATHURELLA LEGRANDI, Beddome.

1883. Drillia legrandi, Beddome. P.R.S. Tas., vol. 35, p. 167.

Hab.—Portland (C. M. Maplestone).

CLATHURELLA ZONULATA, Angas.

1867. Clathurella zonulata, Angas. P.Z.S. Lond., p. 113, pl. 13, f. 17.

1884. Clathurella zonulata, Tryon. Man. Conch., vol. vi. p. 285, pl. 17, f. 89.

Hab.—Western Port.

CLATHURELLA BICOLOR, Angas.

1871. Clathurella bicolor, Angas. P.Z.S. Lond., p. 18, pl. 1, f. 20.

1875. Drillia atkinsoni, T. Woods. P.R.S. Tas., p. 142.

1884. Clathurella bicolor, Tryon. Man. Conch., vol. vi., p. 284, pl. 16, f. 61.

Hab. - Western Port.

CLATHURELLA SEXDENTATA, Pritchard and Gatliff.

1899. Clathurella sexdentata, Pritchard and Gatliff. P.R.S. Vic., vol. xii, n.s., pt. 1. p. 104, pl. 8,

Hab.—Sorrento Beach, Port Phillip.

Obs.—The type of this species is in Mr. Gatliff's private collection, and is a related form to C. modesta, Angas.

Genus Raphitoma, Bellardi, 1847.

RAPHITOMA HARRISONI, T. Woods.

1863. Euryta pulchella, Adams and Angas (non Terebra pulchella, Deshayes). P.Z.S. Lond., p. 418, pl. 37. f. 14.

1865. Euryta pulchella, Angas. Id., p. 169.

1875. Euryta brazieri, Angas (non Terebra brazieri, Angas). Id., p. 390, pl. 45, f. 5, 5a.

1877. Mangelia harrisoni, T. Woods. P.R.S. Vic., p. 56.

1884. Daphnella harrisoni, Tryon. Man. Conch., vol. vi., p. 306.

1885. Terebra (Euryta) angasi, Tryon. Id., vol. vii., p. 38, pl. 12, f. 26.

1886. Terebra (Euryta) angasi, Tate. Southern Science Record, p. 4.

1887. Pleurotoma (Cithara) harrisoni, Gatliff. V.N., vol. iv., p. 59.

1894. Terebra (Euryta) harrisoni, Brazier. P.L.S., N.S.W., vol. ix., p. 693.

Hab.—Western Port.

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Obs.—This shell undoubtedly belongs to the family Pleurotomidæ, and of the preceding genera, we think, after careful comparison with species of Raphitoma, that it is best classed as such.

Genus Mitromorpha, A. Adams, 1865.

MITROMORPHA FLINDERSI, Pritchard and Gatliff.

1899. Mitromorpha flindersi, Pritchard and Gatliff. P.R.S. Vic., vol. xii., n.s., pt. 1, p. 104, pl. 8, f. 6.

Hab.—Ocean Beach, Flinders; and Western Port.

Obs.—The type of this species is in Mr. Gatliff's private collection.

Family CONIDÆ.

Genus Conus, Linnæus, 1758.

Conus anemone, Lamarck.

- 1810. Conus anemone, Lamarck. Ann. du Mus., vol. xv., p. 272.
- 1822. Conus anemone, Lamarck. Anim. S. Vert., vol. vii., p. 479.
- 1841. Conus maculosus, Sowerby. Conch. Illus., f. 3.
- 1843. Conus anemone, Lamarck. Anim. S. Vert. (Deshayes ed.), vol. xi., p. 61, No. 78.
- 1843. Conus anemone, Reeve. Conch. Icon., vol. i., pl. 25, f. 139 a, b.
 - Conus ardisiacus, Kiener. Icon. Coq. Viv., p. 316, pl. 108, f. 1.
- 1853. Conus novæ-hollandiæ, A. Adams. P.Z.S. Lond., p. 119.
- 1859. Conus maculatus, Sowerby. Thes. Conch., vol. iii., p. 31, pl. 199, f. 296.
- 1859. Conus novæ-hollandiæ, Sowerby. *Id.*, p. 31, pl. 199, f. 298, 299.
- 1859. Conus anemone, Sowerby. *Id.*, p. 31, pl. 201, f. 339-341.
- 1875. Conus anemone, Weinkauff. Conch. Cab. (ed. Küster), p. 244, No. 198, pl. 41, f. 1-5.
- 1884. Conus anemone, Tryon. Man. Conch., vol. vi., p. 69, pl. 22, f. 55-57.

1886. Conus anemone, Watson. Chall. Zool., vol. xv., p. 385.

1898. Conus remo, Brazier. P.L.S., N.S.W., vol. xxiii., pt. 2, p. 271.

1898. Conus flindersi, Brazier. Id., p. 780.

Hab.—Coast generally, in rocky pools.

Obs.—Weinkauff in the Conchylien Cabinet (ed. Küster) p. 245, considers C. jukesii, Reeve, as equal to C. anemone, Lamarck, with this, Watson in his Challenger report does not agree (see p. 386), and gives what appear to be excellent reasons for retaining the two species as distinct. Tryon also in his Manual of Conchology regards C. jukesii, as a variety of C. anemone. We certainly agree with Watson.

This shell differs greatly in shape, the spire is sometimes very slightly elevated, exceptionally it is very produced, comprising one-third of the entire length, and more rarely it is scalariform. After his original description Lamarck describes two varieties of colouration; there are many more, the most remarkable being a pure white variety, of which we have obtained many specimens on what is known as the Ocean Beach, Sorrento; on some other specimens the markings are of a rich orange colour, but the transverse elevated striae mentioned by Lamarck, is a feature always present, although varying in degree. The type is mentioned as being 42 mm. in length, we have one before us measuring 64 mm.

We have carefully examined the types of the two last shells quoted, described by Mr. Brazier, and are much surprised that such an authority should have forgotten his cunning to such an extent as to fail to recognise this common and variable species. The further encumbering of species by needless synonymy is difficult to restrain under present procedure, especially if those locally interested have no opportunity of criticism until after the mischief has been accomplished.

Conus Rutilus, Menke.

1843. Conus rutilus, Menke. Moll. Nov. Holl., p. 27, No. 133.

1844. Conus rutilus, Reeve. Conch. Icon., vol. i., pl. 47, f. 264.

- 1857. Conus rutilus, Sowerby. Thes. Conch., vol. iii., p. 5, pl. 200, f. 323.
- 1875. Conus tasmanicus, T. Woods. P.R.S. Tas., p. 139.
- 1876. Conus macleayana, T. Woods. Id., p. 134.
- 1877. Conus smithi, Angas. P.Z.S. Lond., p. 36, pl. 5, f. 8.
- 1879. Conus rutilus, T. Woods. P.R.S. Tas., p. 69.
- 1884. Conus rutilus, Tryon. Man. Conch., vol. vi, p. 24, pl. 6, f. 3.
- 1884. Conus smithi, Tryon. Id., pl. 6, f. 4.
- 1887. Conus smithi, Sowerby. Thes. Conch., vol. v., p. 259, pl. 510, f. 692.

Hab.—Coast generally, commonest in Western Port.

Obs.—This pretty little species has a very wide distribution round Australia and on the north coast of Tasmania. Specimens from our shores attain to a length of 18 mm. by a breadth of 11 mm., and show a considerable variation in colour, from violet through shades of brown to salmon or pinkish; also in the spire we find flat or tabulate forms, occasionally it is much elevated and coronate.

CONUS SEGRAVEI, Gatliff.

1890. Conus segravei, Gatliff. V.N., vol. vii., p. 179 (with a plate of two figures).

Hab.—Beach near Shoreham, Western Port (Gatliff).

Obs.—Figure 11a, plate 3, in Reeve's Conchologia Iconica of C. ammiralis, Lin., much resembles our shell, but the former is a small and granulated variety with a slightly coronated spire. Our species may be readily distinguished from it, and also from C. anemone, Lam., by the smoothness of the body whorl. Since the shell was described some more specimens have been obtained by one of us at the locality named. The type of this species is in Mr. Gatliff's private collection.

Family Strombide.

Genus Strombus, Linnæus, 1758.

STROMBUS FLORIDUS, Lamarck.

1822. Strombus floridus, Lamarck. Anim. S. Vert., vol. vii., p. 211, No. 27.

- 1833. Strombus mutabilis, Swainson. Zool. Illus., 1st ser., vol. ii., pl. 71, f. 1.
- 1834. Strombus floridus, Quoy and Gaimard. Astrolabe Zool., vol. iii., p. 76, pl. 51, f. 12, 13.
 - Strombus floridus, Kiener. Icon. Coq. Viv., p. 63, pl. 32, f. 1, 1a, 1c.
- 1839. Strombus floridus, Lamarck. Anim. S. Vert. (3rd ed. Deshayes and Edwards), vol. iii., p. 750.
- 1842. Strombus mutabilis, Sowerby. Thes. Conch., vol. i., p. 29, pl. 7, f. 40, 45, 46, 47, 49, 52.
- 1843. Strombus floridus, Lamarck. Anim. S. Vert., (Deshayes ed.), vol. ix., p. 707.
- 1845. Strombus floridus, Küster. Conch. Cab., vol. iv., Genus, p. 53, No. 35, pl. 9, f. 8-10.
- 1849. Strombus floridus, Reeve. Conch. Icon., vol. vi., pl. 7, f. 11a, b.
- 1885. Strombus (Canarium) floridus, Tryon. Man. Conch., vol. vii., p. 119, pl. 7, f. 73, 74.

Hab.—Portland (C. M. Maplestone); Port Fairy (Rev. T. Whan).

Obs.—We have never collected this species ourselves. Tryon gives several other synonyms, but with these we have been unable to agree.

Family CYPRÆIDÆ.

Genus Cypræa, Linnæus, 1758.

Cypræa angustata, Gmelin.

CYPRÆA ANGUSTATA, var. piperita, Gray.

CYPRÆA ANGUSTATA, var. comptoni, Gray.

Cypræa angustata, var. bicolor, Gaskoin.

Cypræa angustata, var. declivis, Sowerby.

CYPRÆA ANGUSTATA, var. albata, Beddome.

We cite the following references:—

- 1790. Cypraea angustata, Gmelin. Syst. Nat., p. 3421.
- 1846. Cypræa angustata, Reeve. Conch. Icon., vol. iii., pl. 17, f. 91.
- 1824. Cypræa piperita, Gray. Zool. Jour., vol. i., p. 498.

1847. Cypræa comptoni, Gray. Jukes, Voyage H.M.S. "Fly," vol. ii., appendix p. 356, pl. 1, f. 3.

1848. Cypræa bicolor, Gaskoin. P.Z.S. Lond., p. 92.

1870. Cypræa piperita, Sowerby. Thes. Conch., vol. iv., p. 31, pl. 319, f. 285, 286.

1870. Cypræa piperita, var. bicolor, Sowerby. Thes. Conch., vol. iv., pl. 319, f. 289, and pl. 328, f. 533.

1870. Cypræa declivis, Sowerby. *Id.*, p. 31, pl. 319, f. 287, and pl. 321, f. 328*, 329.

1898. Cypraea albata, Beddome. P.L.S., N.S.W., p. 571, pl. 21, f. 11.

Hab.—Coast generally, in rocky parts.

Obs.—After a careful study of some hundreds of specimens before us, we arrive at the conclusion that there is only one species, showing very great variation, both in form and colouration.

C. angustata, the type, is the dominant form throughout, and usually attains to the greatest size of any of the series, and we would define the principal distinguishing character of this form in contradistinction to its varieties, as being of a uniform colour on the dorsum, in fresh specimens generally purplish or reddishbrown, and showing no bands. We would class the varieties in the order of the date of naming, as follows:—

Var. piperita. Type described as having four bands on the dorsum, being dotted or speckled, and other colouration of dorsum very light brown.

Var. comptoni. Type described as having three bands on the dorsum. No spots on the dorsum are mentioned. Other colouration as in C. angustata, but much paler in tint, occasionally being cream colour.

Var. bicolor. Type described as of a light cream colour, and having three broad irregularly interrupted bands crossing the dorsum. No spots on the dorsum mentioned.

Var. declivis. Type described as having the dorsum of a rosy yellow hue sprinkled over with small spots. No bands are mentioned.

Var. albata. Type described as having a snow white shell, not showing any spots.

REMARKS ON THE VARIETIES.

Var. piperita. This form shows great diversity, sometimes the shape is pyriform, but it is sometimes relatively narrow and elongate, the bands vary in number from 3 to 4, they may be continuous across the back, or discontinuous in the form of broad lines or squarish blotches, or the blotches may assume a crescent shape, occasionally V shaped, recalling C. undata, Lamarck. In two specimens before us the dorsal marking consists of broad undulating longitudinal lines of irregular width.

Var. comptoni. This has occasionally only one broad band across the dorsum, the usual number is 3 to 4, but sometimes only 2, and they are continuous across the shell.

Var. bicolor. Examples we include with this form are occasionally longer and narrower than the type, with darker colouration; in rare specimens, which we would also class here, the darker wave lines run lengthwise instead of across the dorsum. This variety and variety piperita are difficult to separate from one another.

Var. declivis. The dorsal spots are sometimes on a purely white or a faint brown ground, and sometimes confluent, and in some specimens the dorsal blotchings at the extremities are entirely absent.

Var. albata. This is the rarest and also the most distinct variety, owing to the entire absence of the dark spots on the margins; besides the typical white shell, we have others before us narrower in form, and of a pinkish flesh colour, that have no spots or bands.

In worn specimens of var. piperita, the small dorsal spots are often absent, and the shell then resembles either var. comptoni or var. bicolor.

An examination of young shells ranging from 7 mm. to 22 mm. in length, in which the outer lip is acute, shows that as might be expected, var. albata, has no markings, all the others, with the exception probably of var. declivis, appear to start with five dotted lines, one of them immediately encircling the spire; this one soon becomes hidden, and the lower one generally as the shell grows is discontinued; two of the other bands often unite forming a broad central band, the change being distinctly

discernable on the columellar side of many shells that have not fully attained adult growth. In C. angustata the lines are all discontinued, and the shell generally becomes of a uniform brown, varying, however, in tint. The spots on the dorsum are, we think, the last formed, as we have seen no trace of them in the very young shells, and we infer that probably the young of the varieties declivis and albata, prior to the in-turning of the outer lip are identical.

We consider from the descriptions and figures of C. angustata varieties mayi, and subcarnea, Beddome, that the former is var. comptoni, and the latter a somewhat rare form of the type C. angustata.

We think it probable that a large representative collection of West Australian specimens of this species will lead to the inclusion of C. pulicaria, Reeve, as being another variety of C. angustata.

All the adult shells, with the exception of var. albata, have the round dark spots on the margin, and encircling the shell at the base, these spots vary greatly in size on different specimens, and are occasionally absent at the ends, at other times they are very numerous at the ends and become confluent.

To assist in following our definitions we give the following synopsis:—

Synopsis.

Dorsum brown, no bands, no spots,—C. angustata.

Dorsum light brown or cream, no bands, but numerous spots,—var. declivis.

Dorsum light brown or cream, with bands and numerous spots, —var. piperita.

Dorsum light brown or cream, with continuous bands, but no spots,—var. comptoni.

Dorsum cream or light brown, with interrupted bands, but no spots,—var. bicolor.

Without bands or spots of any kind,- var. albata.

Note.—In the references we have only cited the original, in each case, and a second reference which gives a tigure, when one was not given with the original description. C. angustata was re-named C. maculata by Perry in 1811, but we do not know of any instance where this synonym has been used in Australia.

CYPRÆA UMBILICATA, Sowerby.

- 1825. Cypræa umbilicata, Sowerby. Tankerville Cat. App., p. 30, pl. 7, No. 2260.
- 1829. Cypræa umbilicata, Gray. Zool., Journal., vol. iv., p. 77.
- 1845. Cypræa pantherina, (monstrosity), Reeve. Conch. Icon., vol. iii., species 7.
- 1870. Cypræa umbilicata, Sowerby. Thes. Conch., vol. iv., pl. 298, f. 42-44.
- 1885. Cypræa umbilicata, Tryon. Man. Conch., vol. vii., p. 181, pl. 12, f. 65, 66.
- 1898. Cypræa umbilicata, Beddome. P.L.S., N.S.W., pp. 564-568.

Hab.—Gippsland Coast; Portland.

Note.—Cypræa annulus, Lin., has been said to have been collected from our coast more than ten years ago, but we have been unable to find any trace of it hitherto.

Sub-genus Trivia, Gray, 1832.

TRIVIA AUSTRALIS, Lamarck.

- 1822. Cypræa australis, Lamarck. Anim. S. Vert., vol. vii., p. 404.
- 1834. Cypræa australis, Quoy and Gaimard. Astrolabe Zool., vol. iii., p. 48, pl. 48, f. 19-26.
 - Cypræa australis, Kiener. Icon. Coq. Viv., p. 138, sp. 125, pl. 48, f. 2.
- 1838. Cypræa rosea, Duclos. Potiez. Gall. des Moll., p. 477.
- 1844. Cypræa australis, Lamarck. Anim. S. Vert. (ed. Desh.), vol. x., p. 545.
- 1846. Cypraea australis, Reeve. Conch. Icon., vol. iii., pl. 24, f. 138.
- 1870. Cypræa (Trivia) australis, Sowerby. Thes. Conch., vol. iv., p. 45, pl. 325, f. 439, 440.
- 1881. Cypræa australis, Weinkauff. Conch. Cab. (ed. Küster), p. 142, pl. 49, f. 14, 15.
- 1885. Trivia australis, Tryon. Man. Conch., vol. vii., p. 206, pl. 23, f. 53, 54.

1898. Trivia australis, Beddome. P.L.S., N.S.W., p. 576, pl. 21, f. 19.

Hab.—Coast generally, rather common.

TRIVIA ORYZA, Lamarck.

1810. Cypræa oryza, Lamarck. Ann. du Mus., vol. xvi., p. 104.

1822. Cypræa oryza, Lamarck. Anim. S. Vert., vol. vii., p. 403.

1844. Cypræa oryza, Lamarck. Anim. S. Vert. (ed. Desh.), vol. x., p. 543.

1846. Cypræa oryza, Reeve. Conch. Icon., vol. iii., pl. 24, f. 140.

1870. Cypraea (Trivia) oryza, Sowerby. Thes. Conch., vol. iv., p. 46, pl. 326, f. 474, 475.

1885. Trivia oryza, Tryon. Man. Conch., vol. vii., p. 200, pl. 21, f. 82, 83.

Hab.—Port Phillip, dredged in 5 fathoms (McGillivray, Voyage of "Rattlesnake" appendix p. 363).

Genus Erato, Risso, 1826.

ERATO DENTICULATA, Pritchard and Gatliff, m.s.

Hab.—San Remo; Otway Coast, between Ryan's Den and Moonlight Head (Mr. P. J. Fulton).

Obs.—This species is somewhat related in form to E. sandwiciensis, Pease, described in the Proceedings of the Zoological Society of London for 1860, p. 146. This and another new species, whose descriptions are now ready for publication, are recorded under manuscript names as they were not sufficient to make up a plate by themselves, but as soon as sufficient of the remaining new material has been considered, we will publish their figures and descriptions.

Family Cassididæ.

Genus Cassis, Klein, 1753.

Cassis fimbriata, Quoy and Gaimard.

1833. Cassis fimbriata, Quoy and Gaimard. Astrolabe, Zool., vol. ii., p. 596, pl. 43, f. 7, 8.

Cassis fimbriata, Kiener. Icon. Coq. Viv., pl. 4, f. 6.

1848. Cassis fimbriata, Reeve. Conch. Icon., vol. v., pl. 7, f. 17.

1857. Cassis fimbriata, Küster. Conch. Cab., p. 28, pl. 47, f. 12, and pl. 48, f. 12.

1885. Cassis fimbriata, Tryon. Man. Conch., vol. vii., p. 272, pl. 3, f. 35.

Hab.—Portland.

Cassis Pyrum, Lamarck.

1844. Cassis pyrum, Lamarck. Anim. S. Vert. (Deshayes ed.), vol. x., p. 33.

1848. Cassis pyrum, Reeve. Conch. Icon., vol. v., pl. 11, f. 29.

1857. Cassis pyrum, Küster. Conch. Cab., p. 29, pl. 47, f. 56.

Cassis nivea, Brazier. P.Z.S. Lond., p. 616, pl. 44,
 f. 1.

1880. Cassis pyrum, Hutton. Man. N.Z. Moll., p. 66.

1885. Cassis (Casmaria) achatina var. pyrum, Tryon. Man. Conch., vol. vii., p. 278, pl. 8, f. 96-98.

1885. Cassis tumida, Petterd. P.R.S. Tas., p. 321.

Hab.—Port Phillip; Western Port; Gippsland Coast; Airey's Inlet; Otway Coast.

Obs.—We cannot agree with Tryon in regarding C. paucirugis, Menke, as a synonym; that species is numerously and strongly denticulated within the lip, a feature never present in C. pyrum. C. tumida, Petterd, is a young immature shell. Some of the largest Victorian specimens of this species hitherto obtained have been collected in Port Phillip Bay.

Cassis achatina, Lamarck.

1844. Cassis achatina, Lamarck. Anim. S. Vert. (Deshayes ed.), vol. x., p. 33.

1848. Cassis achatina, Reeve. Conch. Icon., vol. v., pl. 11, f. 28a.

1857. Cassis achatina, Küster. Conch. Cab., p. 34, pl. 50, f. 3, 4.

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1867. Cassis achatina, Angas. P.Z.S. Lond., p. 196.

1880. Cassis achatina, Hutton. Man. N.Z. Moll., p. 66, and p. 202.

1885. Cassis (Casmaria) achatina, Tryon. Man. Conch., vol. vii., p. 278, pl. 8, f. 94.

Hab.—San Remo; Bass' Straits (Tenison Woods); Waratah Bay (Miss Stirling).

Cassis semigranosa, Lamarck.

1822. Cassis semigranosa, Lamarck. Anim. S. Vert., vol. vii., p. 228, No. 23.

1828. Cassis semigranosa, Wood. Index Test. Supp., pl. 4, f. 2.

1844. Cassis semigranosa, Lamarck. Anim. S. Vert. (Deshayes ed.), vol. x., p. 37.

1848. Cassis semigranosa, Reeve. Conch. Icon., vol. v., pl. 1, f. 3.

1857. Cassis semigranosa, Küster. Conch. Cab., p. 24, pl. 44, f. 6, 7.

1885. Carris (Semicassis) semigranosa, Tryon. Man. Conch., vol. vii., p. 275, pl. 3, f. 60.

Hab.—Port Phillip; Western Port; Gippsland coast; Otway coast.

Family NATICIDÆ.

Genus Natica, Adanson, 1757.

NATICA PLUMBEA, Lamarck.

1822. Natica plumbea, Lamarck. Anim. S. Vert. (Deshayes ed.), vol. viii., p. 632.

1832. Natica plumbea, Quoy and Gaimard. Astrolabe, Zool., vol. ii., p. 234, pl. 66, f. 13-15.

1833. Natica sordida, Swainson. Zool. Illus., vol. ii., pl. 79.

1833. Natica melastoma, Swainson. Id., pl. 79.

1839. Natica plumbea, Lamarck. Anim. S. Vert. (3rd edition, Deshayes and Edwards), vol. iii., p. 493.

1841. Natica sanguinolenta, Deshayes. Guerin's Magazine de Zool., pl. 46.

- 1855. Natica plumbea, Reeve. Conch. Icon., vol. ix., pl. 9, f. 34a, b.
- 1855. Natica leucoptræa, Reeve. Id., pl. 12, f. 51.
- 1855. Natica melastoma, Reeve. Id., pl. 18, f. 78.
- 1855. Natica strangei, Reeve. Id., pl. 18, f. 81.
- 1883. Natica leucoptrea, Sowerby. Conch. Icon., vol. v., p. 88, pl. 458, f. 60.
- 1883. Natica plumbea, Sowerby. Id., p. 87, pl. 459, f. 69.
- 1883. Natica strangei, Sowerby. Id., p. 87, pl. 459, f. 80.
- 1883. Natica melastoma, Sowerby. Id., p. 87, pl. 460, f. 100.
- 1886. Natica plumbea, Tryon. Man. Conch., vol. viii., p. 44, pl. 18, f. 78.
- 1886. Natica leucoptrea, Tryon. Id., p. 45, pl. 18, f. 80, 82.
- 1886. Natica melastonia, Tryon. Id., p. 45, pl. 18, f. 81. Hab.—Coast generally.

Obs.—This species varies greatly in shape, from a somewhat conical to almost globose form; its chief distinguishing characters are, the blood red callosity of the columella, dark interior, and greyish coloured exterior. The callosity only partially covers the umbilicus in the type, but entirely covers it in some examples from Western Australia = N. melastoma, Swainson, and some examples from New South Wales show a medium development in this respect.

NATICA DIDYMA, Chemnitz.

Natica didyma, Bolten, m.s.

Natica didyma, Chemnitz. Conch. Cab. vol. v. p. 246, pl. 186, f. 1856-59.

- 1848. Natica bicolor, Philippi. Zeitschrift. f. malak. p. 156.
- 1848. Natica ampla, Philippi. Id., p. 156.
- 1851. Natica papyracea, Philippi. Abh. und. Besch., vol. ii, p. 45, sp. 12, pl. 2, f. 12.
- 1852. Natica didyma, Philippi. Conch. Cab. (ed. Küster) vol. iii, p. 6, sp. 1, pl. 1, f. 1-4.

- 1852. Natica papyracea, Philippi. Conch. Cab. (ed. Küster) vol. ii, p. 43, sp. 42b, pl. 5, f. 4, and p. 87, sp. 99, pl. 13, f. 4.
- 1852. Natica bicolor, Philippi. Id., p. 43, sp. 42, pl. 6, f. 4.
- 1852. Natica ampla, Philippi. Id., p. 41, sp. 40, pl. 6, f. 2.
- 1855. Natica chemnitzii, Reeve. (From Recluz, m.s.), (non N. chemnitzii, Pfeiffer). Conch. Icon., vol. ix., pl. 2, f. 7.
- 1855. Natica lamarckiana, Reeve. (From Recluz, m.s.). Id., pl. 2, f. 6.
- 1855. Natica petiveriana, Reeve. (From Recluz, m.s.). Id., pl. 5, f. 17.
- 1855. Natica problematica, Reeve. Id., pl. 6, f. 21.
- 1875. Natica tasmanica, T. Woods. P.R.S. Tas., pp. 148-149.
- 1883. Natica didyma, Sowerby. Thes. Conch., vol. v., pts. 39, 40, p. 77, sp. 7, pl. 454 (1 gen.), f. 4, and pl. 455, f. 14.
- 1886. Natica (Neverita) didyma, Watson. Chall. Zool., vol. xv., p. 450, No. 23.
- 1886. Natica ampla, Tryon. Man. Conch., vol. viii., p. 32, pl. 10, f. 81, 82, 85, 86, and pl. 11, f. 91, 93.

Hab.—Common at most of the sandy parts of our coast.

Obs.—Outside Victoria this species appears to have an extremely wide range, as, in addition to the whole Australian coast, it is recorded as far north as China and Japan, also throughout the Indian Ocean, and as a consequence the form of the species is so variable as to have occasioned considerable confusion. There seems to be no choice but to include the whole of the above under one species when a considerable number of specimens are considered in series. In the above reference to Tryon, figure 81, refers to N. didyma, f. 82 to N. chemnitzii, f. 85 to N. papyracea, f. 86 to N. lamarckiana, and on plate 11, f. 91 to N. petiveriana, and f. 93 to N. problematica; he also includes N. incisa, Dunker, plate 10, f. 83, and N. vesicalis, Philippi, plate 11, f. 92, as synonyms, but with these we cannot agree.

As a digest of some of the more important features we cannot do better than quote the remarks made by Mr. E. A. Smith on this species:—"This species varies considerably in form, and the extent of the umbilical callosity, which, however, displays a quite constant peculiarity in being subdivided by a more or less deeply transverse furrow. The umbilicus, too, is much more open in the typical form than in the var. named by Recluz, Natica chemnitzii. Colour is of no assistance, the chief variation consisting in the intensity of the tint of the aperture and the whiteness of the base."

NATICA CONICA, Lamarck.

- 1838. Natica conica, Lamarck. Anim. S. Vert., vol. viii., p. 632.
- 1839. Natica conica, Lamarck. Anim. S. Vert. (3rd edition, Deshayes and Edwards), vol. iii., p. 493.
- 1852. Natica conica, Philippi. Conch. Cab. (ed. Küster), p. 102, sp. 115, pl. 15, f. 3.
- 1855. Natica conica, Reeve. Conch. Icon., vol. ix., pl. 12, f. 48.
- 1883. Natica conica, Sowerby. Thes. Conch., vol. v., p. 88, pl. 456, f. 25.
- 1883. Natica ustulata, Sowerby. *Id.*, p. 88, pl. 461, f. 112.
- 1886. Natica conica, Tryon. Man. Conch., vol. viii., p. 44, pl 18, f. 76, 77.

Hab.—Coast generally.

Obs.—Readily distinguished from our other species by its more conical form.

NATICA SAGITTATA, Menke.

- 1843. Natica sagittata, Menke. Moll. Nov. Holl., p. 10, No. 30.
- 1855. Natica proxima, Reeve (non Adams). Conch. Icon., vol. ix., pl. 27, f. 126c only.
- 1886. Natica canrena, Tryon (non Lin.). Man. Conch., vol. viii., p. 20, pl. 4, f. 59.

Hab.—Port Phillip; Western Port.

Obs.—We have correctly identified specimens of N. marochiensis, Lamarck, before us, with which the above species has been confused, apart from differences of form and colour marking, the umbilical characters are quite distinct.

Natica incei, Philippi.

- 1851. Natica incei, Philippi. P.Z.S. Lond., p. 233.
- 1855. Natica incei, Reeve. Conch. Icon., vol. ix., pl. 20, f. 87.
- 1855. Natica baconi, Reeve. Id., pl. 10, f. 37.
- 1855. Natica fibula, Reeve. Id., pl. 28, f. 130.
- 1883. Natica baconi, Sowerby. Thes. Conch., vol. v., p. 76, pl. 454, f. 2.
- 1883. Natica incei, Sowerby. Id., p. 77, pl. 456, f. 27, pl. 458, f. 63-64, pl. 461, f. 101-103.
- 1886. Natica (Neverita) incei, Tryon. Man. Conch., vol. viii., p. 33, pl. 10, f. 87-89, and pl. 11, f. 95.

Hab.—Wilson's Promontory (A. H. S. Lucas).

Obs. — Reeve's species, N. baconi, is founded on a large specimen with a predominating bluish-grey tint, and his N. fibula is merely a young shell. Tryon unites with this species, N. clavata, Sowerby, which has especial and striking characters, the specimens before us from Mauritius have the body whorl covered with a light brown epidermis.

NATICA BEDDOMEI, Johnston.

- 1884. Natica beddomei, Johnston. P.R.S. Tas. p. 208, and 222.
- 1886. Natica beddomei, Tryon. Man. Conch., vol. viii., p. 54.
- 1886. Natica effossa, Watson. Chall. Zool., vol. xv., p. 439, and pp. 704-706, pl. 28, f. 3.
- 1893. Natica beddomei, Tate. T.R.S., S.A., vol. xvii., p. 325.
- 1895. Natica beddomei, Brazier. P.L.S., N.S.W., vol. ix., 2nd series, p. 692.

Hab.—Dredged, 33 fathoms, sand, off entrance to Port Phillip (Challenger); Portsea; Sorrento; Puebla Coast.

Obs.—Tenison Woods considered this species identical with a fossil species named by him N. polita. but such is not the case.

NATICA SUBCOSTATA, T. Woods.

1878. Natica subcostata, T. Woods. P.L.S. N.S.W., vol ii., p. 263.

Hab.—Dredged off Phillip Island, Western Port, in about 5 fathoms, sandy mud (Chas. J. Gabriel). Two specimens.

Obs.—The type was dredged off Port Jackson Heads, 45 fathoms, it has not yet been figured, but is in the Australian Museum, Sydney. Mr. Chas. Hedley has kindly compared our shell, and writes, "I have carefully compared it with the type of N. subcostata. Except that it is larger, having another half whorl, it corresponds in every feature; without doubt it is identical."

NATICA SHOREHAMI, Pritchard and Gatliff, m.s.

Hab.—Shoreham, San Remo, Western Port; Schnapper Point, Sorrento, Portsea, Port Phillip.

Genus Sigaretus, Lamarck, 1799.

SIGARETUS ZONALIS, Quoy and Gaimard.

1832. Cryptostoma zonalis, Quoy and Gaimard. Astrolabe, vol. ii., p. 221, pl. 66 bis., f. 1-3.

1842. Sigaretus australis, Hanley. Young Conchologists' Book of Species p. 57, pl. 1.

1864. Sigaretus zonalis, Reeve. Conch. Icon., vol. xv., pl. 2, f. 6a, b.

1864. Sigaretus australis, Reeve. Id., pl. 3, f. 15 a, b.

1882. Sigaretus zonalis, Sowerby. Thes. Conch., vol. v., p. 41, pl. 441, f. 7.

1877. Sigaretus zonalis, T. Woods. P.R.S. Tas., p. 33.

1883. Sigaretus zonalis, Weinkauff. Conch. Cab., p. 27, pl. 6, f. 7-10.

1886. Sigaretus levigatus, Tryon (non Lamarck). Man. Conch., vol. viii., p. 55, pl. 24, f. 50, 51.

Hab.—Port Phillip; Western Port; Otway Coast.

EUNATICINA UMBILICATA, Quoy and Gaimard.

1832. Natica umbilicata, Quoy and Gaimard. Astrolabe, vol. ii., p. 234, pl. 66, f. 22, 23.

1839. Natica umbilicata, Lamarck. Anim. S. Vert. (3rd ed. Deshayes and Edwards) vol. iii., p. 501.

1855. Natica umbilicata, Reeve. Conch. Icon., vol. ix., pl. 24, f. 108a, b.

1864. Sigaretus pictus, Reeve. Id., vol. xv., pl. 5, f. 24a, b.

1875. Ruma globosa, T. Woods. P.R.S. Tas., p. 149.

1882. Sigaretus (Naticina) pictus, Sowerby. Thes. Conch., vol. v. p. 45, pl. 442 bis., f. 36.

1883. Natica umbilicata, Sowerby. *Id.*, p. 98, pl. 457, f. 77.

1883. Sigaretus (Naticina) pictus, Weinkauff. Conch. Cab., p. 45, pl. 10, f. 10, 11.

1886. Natica (Mamilla) umbilicata, Tryon. Man. Conch., vol. viii., p. 52, pl. 22, f. 26.

1886. Sigaretus (Eunaticina) pictus, Tryon. *Id.*, p. 59, pl. 25, f. 92.

1897. Natica umbilicata, Tate. T.R.S., S.A., p. 41.

Hab.—Coast generally.

Obs.—This species is fairly constant in shape, but some specimens are more globose, and others flatter than the type, which is marked with chestnut flamings interrupted by a spiral central white band; sometimes there are rows of encircling dark brown spots = S. pictus, Reeve, and others are entirely white = R. globosa, T. Woods.

EUNATICINA NITIDA, Reeve.

1864. Sigaretus nitidus, Reeve. Conch. Icon., vol. xv., p. 64, f. 20.

1886. Sigaretus (Eunaticina) papilla, var. Tryon. Man. Conch., vol. viii., p. 58, pl. 25, f. 87.

Hab.—Puebla coast.

Obs.—We have been struck with the resemblance of the above to specimens of S. papilla, Gmelin, but our shell is sufficiently distinct to be kept separate unless a uniting series is obtained.

Genus Lamellaria, Montagu, 1815.

LAMELLARIA WILSONI, E. A. Smith.

1886. Lamellaria wilsoni, E. A. Smith. A.M.N.H., V. series, vol. xviii., p. 270, figured.

1887. Lamellaria wilsoni, Wilson. V.N., p. 117. Hab.—Port Phillip (J. B. Wilson).

LAMELLARIA OPHIONE, Gray.

1849. Lamellaria ophione, Gray. P.Z.S. Lond., p. 169.

1880. Coriocella ophione, Hutton. Man. N.Z. Moll., p. 59.

1886. Lamellaria ophione, Tryon. Man. Conch., vol. viii., p. 63.

Hab.—Western Port; Port Phillip.

Genus Vanikoro, Quoy and Gaimard, 1832.

Vanikoro quoyiana, A. Adams.

1853. Vanicoro quoyiana, A. Adams. P.Z.S. Lond., p. 175, pl. 20, f. 4.

1867. Vanikoro quoyana, Angas. Id., p. 212.

1886. Vanikoro orbignyana, Tryon (non Recluz). Man. Conch., vol. viii., p. 70.

Hab. — Hobson's Bay (National Museum).

Obs.—Tryon at the reference given misquotes the species as V. quoyi, Adams, and unites it with V. orbignyana; the latter, however, has a narrow and deep umbilicus. Adams does not even mention this character in the description of his species, and Angas states that it is "scarcely umbilicated."

Family HIPPONYCID.E.

Genus Hipponyx, Defrance, 1819.

HIPPONYX ANTIQUATUS, Linnieus.

1766. Patella antiquata, Linnæus. Syst. Nat., 12th edition, p. 1259, No. 762.

1788. Patella mitrula, Gmelin. Syst. Nat., p. 3708.

1835. Hipponyx foliacea, Quoy and Gaimard. Astrolabe, vol. iii., p. 439, pl. 72, f. 41-45.

1835. Hipponyx mitrula, Sowerby. P.Z.S. Lond., p. 5.

1839. Pileopsis mitrula, Lamarck. Anim. S. Vert. (3rd ed. Deshaves and Edwards), vol. iii., p. 224, No. 2.

1839. Hipponix foliacea, Lamarck. Id., p. 227, No. 4.

1846. Hipponyx mitrula, Sowerby. Thes. Conch., vol. i., p. 369, pl. 73, f. 18-20.

Hab.—Coast generally.

HIPPONYX AUSTRALIS, Lamarck.

- 1819. Patella australis, Lamarck. Anim. S. Vert., vol. vi., pt. 1, p. 335, sp. 44.
- 1822. Patella australis, Lamarck. *Id.*, vol. vii., p. 541, sp. 44.
- 1835. Hipponyx australis, Quoy and Gaimard. Astrolabe, vol. iii., p. 434, pl. 72, f. 25-34.
- 1835. Hipponyx australis, Quoy and Gaimard. Id., f. 39, 40.
- 1839. Patella australis, Lamarck. Anim. S. Vert. (3rd ed. Deshayes and Edwards), vol. iii., p. 199, No. 44.
- 1841. Patella australis, Delessert. Recueil de Coquilles déscrites par Lamarck, f. 11a, b, c.
- 1858. Amalthea australis, Adams. Genera, vol. i., p. 374, pl. 41, f. 4.
- 1862. Hipponyx australis, Crosse. Jour. d. Conch., vol. x., p. 21, sp. 6.
- 1880. Hipponyx australis, Hutton. Man. N.Z. Moll., p. 88.
- 1886. Hipponyx australis, Tryon. Man. Conch., vol. viii., p. 136, pl. 41, f. 9-15.
- 1886. Amalthea australis, Watson. Chall. Zool., vol. xv., p. 457, No. 2.

Hab.—Coast generally.

Obs.—This species has been regarded by some as identical with Amalthea conica, Schumacher, Essai Nouv. Gen., p. 181, pl. 21, f. 4, published in 1817; we have been unable to consult this work and are therefore not in a position at present to express an opinion. Watson in his Challenger report, remarks "Capulus danieli, Crosse, approaches this species very closely, but in it the apex turns to the left while in the present shell the apex turns to the right."

Genus Mitrularia, Schumacher, 1817.

MITRULARIA EQUESTRIS, Linnæus.

1766. Patella equestris, Linnæus. Syst. Nat., p. 257.

1788. Patella equestris, Gmeliu. Syst. Nat., p. 3691, No. 1.

- 1822. Calyptræa equestris, Lamarck. Anim. S. Vert., vol. vii., p. 264.
- 1839. Calyptræa equestris, Lamarck. Id. (3rd ed. Deshayes and Edwards), vol. iii., p. 230, No. 3.
- 1858. Calyptræa equestris, Reeve. Conch. Icon., vol. xi., pl. 1, f. 1, a, b, c.
- Calyptræa equestris, Woodward. Man. Moll., 1875. p. 276, pl. 11, f. 10.
- 1883. Calyptrea equestris, Sowerby. Thes. Conch., vol. v., p. 55, pl. 445, f. 1, 2.
- 1886. Mitrularia equestris, Tryon. Man. Conch., vol. viii., p. 137, pl. 41, f. 25, 26.
- 1887. Mitrularia equestris, Fischer. Man. de. Conch., p. 754, pl. 11, f. 10.

Hab.—Flinders (Segrave).

Obs.—This is a white shell, thin in substance, with a vitreous interior; it is exceedingly variable in form and the synonymy is so great we have refrained from citing it, but the references given will suffice to identify the species; it is very widely distributed in the Southern Hemisphere.

Family CAPULIDE.

Genus Calyptræa, Lamarck, 1799.

Calyptræa calytræformis, Lamarck.

- 1822. Trochus calyptræformis, Lamarck. Anim. S. Vert., vol. vii., p. 12.
- 1835. Crepidula tomentosa, Quoy and Gaimard. Astrolabe, vol. iii., p. 419, pl. 72, f. 1-5.
- 1839. Trochus calyptræformis, Lamarck. Anim. S. Vert. (3rd ed. Deshayes and Edwards), vol. iii., p. 546, No. 7.
- 1843. Trochus calyptræformis, Lamarck. Id. (ed. Desh.), vol. ix., p. 125, sp. 7, and p. 162, sp. 9.
- 1859. Trochita calyptræformis, Reeve. Conch. Icon., vol. xi., pl. 3, f. 11.
- 1883. Trochita calypræformis, Sowerby. Thes. Conch., vol. v., p. 63, pl. 450, f. 85, 86.

1886. Calyptræa (Sigapatella) calyptræformis, Tryon.

Man. Conch., vol. viii., p. 122, pl. 35, f. 96,
97.

1886. Trochita calyptræformis, Watson. Chall. Zool., vol. xv., p. 460, No. 1.

Hab.—Coast generally.

Obs.—Tryon unites with this T. maculata, Quoy and Gaimard, a New Zealand species, which is closely allied, but readily distinguished by its deeper form, and its apex is less central. There is nothing of a pearly nature about either species as described by some authors.

Genus Crepidula, Lamarck, 1799.

CREPIDULA UNGUIFORMIS, Lamarck.

- 1822. Crepidula unguiformis, Lamarck. Anim. S. Vert., vol. vii., p. 642.
- 1830. Crepidula monoxyla, Lesson. Voyage Coquille, Zool., vol. ii., pt. 1, p. 391.
- 1835. Crepidula contorta, Quoy and Gaimard. Astrolabe, vol. iii, p. 418, pl. 72, f. 15, 16.
- 1839. Crepidula unguiformis, Lamarck. Anim. S. Vert-(3rd ed. Deshayes and Edwards), vol. iii., p. 237, No. 4.
- 1839. Crepidula contorta, Lamarck. Id., p. 237, No. 8.
- 1859. Crepidula unguiformis, Reeve. Conch. Icon., vol. xi., pl. 1, f. 1.
- 1873. Crypta contorta, Hutton. Cat. N.Z. Moll., p. 32.
- 1880. Crypta monoxyla, Hutton. Man. N.Z. Moll., p. 87.
- 1880. Crypta unguiformis, Hutton. Id., p. 87.
- 1883. Crepidula unguiformis, Sowerby. Thes. Conch., vol. v., p. 69, pl. 453, f. 139, 140.
- 1886. Crepidula monoxyla, Tryon. Man. Conch., vol. viii., p. 128, pl. 37, f. 35, 36.
- 1886. Crepidula (Janacus) unguiformis, Tryon. *Id.*, p. 130, pl. 39, f. 66.
- 1887. Crepidula monoxyla, Wilson. V.N., p. 116. Hab.—Coast generally.

Obs.—When the shell by its form gives evidence of having developed on the outside of another shell, the lamina is imbedded much more deeply, the dorsal portion is brown in colour, and often exhibits a rude series of ridges radiating from the apex, but not present on the nucleus; these features are not discernible when the habitat is inside another shell. Tryon's remarks on C. monoxyla are "this species does not appear to have any special characteristics; a C. unguiformis growing on the outside of a narrow shell would be apt to take on the same form;" from the large series before us we have no doubt that this view is correct and have therefore included it as above.

CREPIDULA IMMERSA, Angas.

- 1865. Crypta immersa, Angas (non Adams and Reeve). P.Z.S. Lond., p. 57, pl. 2, f. 12, also p. 174, No. 118.
- 1886. Crepidula immersa, Watson. Chall. Zool., vol. xv., p. 460, No. 4.
- 1886. Crepidula onyx, Tryon (non Sowerby). Man. Conch., vol. viii., p. 128, pl. 38, f. 46, 47.

1887. Crepidula immersa, Wilson. V.N., p. 116.

Hab.—Port Phillip (J. B. Wilson): off East Moncoeur Island, Bass Strait (Challenger); Puebla Coast.

Obs.—Tryon unites many species as being C. onyx, Sowerby, we cannot follow him.

Family Turritellide.

Genus Turritella, Lamarck, 1799.

TURRITELLA AUSTRALIS, Lamarek.

- 1839. Turritella australis, Lamarck. Anim. S. Vert. (3rd ed. Deshayes and Edwards), vol. iii., p. 592, No. 12.
- 1843. Turritella australis, Lamarck. Anim. S. Vert., vol. ix., p. 258.
 - Turritella australis, Kiener. Icon. Coq. Viv. p. 36, pl. 4, f. 3.
- 1875. Turritella granulifera, T. Woods. P.R.S. Tas., p. 143.

1886. Turritella (Zaria) australis, Tryon. Man. Conch., vol. viii., p. 207, pl. 65, f. 23.

1897. Turritella (Zaria?) australis, Kobelt. Conch. Cab., p. 33, pl. 8, f. 5, 6.

Hab.—Gippsland Coast; off Phillip Island, Western Port.

TURRITELLA SPECTRUM, Reeve.

1849. Turritella spectrum, Reeve. Conch. Icon., vol. v., pl. 8, f. 40.

1886. Turritella terebra, var. Tryon. Man. Conch., vol. viii., p. 195, pl. 59, f. 33.

Hab.—Portland (C. M. Maplestone); Portsea (G. B. Pritchard).

Obs.—Only a few very much worn specimens found. It is somewhat doubtful whether the species is indigenous to Victoria.

TURRITELLA OXYACRIS, Tate.

1875. Turritella acuta, T. Woods (non Mayer). P.R.S. Tas., p. 143.

1886. Turritella (Torcula) acuta, Tryon. Man. Conch., vol. viii., p. 206, pl. 64, f. 10.

1897. Turritella (Torcula) acuta, Kobelt. Conch. Cab., p. 56, pl. 18, f. 5.

1897. Turritella oxyacris, Tate. T.R.S., S.A., vol. xxi., p. 41.

Hab.—Dredged alive about 5 fathoms, off Phillip Island, Western Port, by C. J. Gabriel. Cowes (T. S. Hall).

TURRITELLA GUNNI, Reeve.

1849. Turritella gunni, Reeve. Conch. Icon., vol. v., pl. 9, f. 45.

1886. Turritella (Haustator) gunni, Tryon. Man. Conch., vol. viii., p. 203, pl. 63, f. 86.

Hab.—Lorne; Port Albert.

Turritella clathrata, Kiener.

Turritella clathrata, Kiener. Icon. Coq. Viv., p. 33, pl. 14, f. 1.

1849. Turritella clathrata, Reeve. Conch. Icon., vol. v., pl. 8, f. 37.

1886. Turritella (Torcula) clathrata, Tryon. Man. Conch., vol. viii., p. 206, pl. 64, f. 2.

1897. Turritella (Torcula) clathrata, Kobelt. Conch. Cab., p. 26, pl. 7, f. 5.

Hab.—South-west Victorian Coast.

Obs.—Tryon unites with the above T. constricta, Reeve, Conch. Icon., pl. 10, f. 16, but judging from Reeve's figure and description, we are very doubtful as to its being identical.

TURRITELLA RUNCINATA, Watson.

1881. Turritella runcinata, Watson. J.L.S. Lond., vol. xv., p. 218.

1886. Turritella runcinata, Watson. Chall. Zool., vol. xv., p. 475, No. 14, pl. 30, f. 3.

Hab.—Off East Moncoeur Island, Bass Strait, 38 to 40 fathoms, sand and shells (Challenger).

TURRITELLA ACCISA, Watson.

1881. Turritella accisa, Watson. J.L.S. Lond. vol. xv., p. 220.

1886. Turritella accisa, Watson. Chall. Zool., vol. xv., p. 476, No. 15, pl. 30, f. 4.

Hab.—Off East Moncoeur Island, Bass Strait, 38 to 40 fathoms, sand and shells (Challenger).

Turritella Lamellosa, Watson.

1881. Turritella lamellosa, Watson. J.L.S. Lond. vol. xv., p. 229.

1886. Turritella lamellosa, Watson. Chall. Zool., vol. xv., p. 474, No. 13, pl. 29, f. 6.

Hab.—Off East Moncoeur Island, Bass Strait, 38 to 40 fathoms, sand and shells (Challenger).

Turritella cordismei, Watson.

1881. Turritella cordismei, Watson. J.L.S. Lond. vol. xv., p. 224.

1886. Turritella cordismei, Watson. Chall, Zool., vol. xv., p. 469, No. 9, pl. 29, f. 1.

Hab.—Off East Moncoeur Island, Bass Strait, 38 to 40 fathoms, sand and shells (Challenger).

TURRITELLA CARLOTTÆ, Watson.

1881. Turritella carlottæ, Watson. J.L.S. Lond. vol. xv., p. 222.

1886. Turritella carlottæ, Watson. Chall. Zool., vol. xv., p. 478, No. 16, pl. 30, f. 5.

Hab.—Off East Moncoeur Island, Bass Strait, 38 to 40 fathoms, sand and shells (Challenger).

Turritella Philippensis, Watson.

1881. Turritella philippensis, Watson. J.L.S. Lond., vol. xv., p. 223.

1886. Turritella philippensis, Watson. Chall. Zool., vol. xv., p. 479, No. 17, pl. 30, f. 6.

Hab.—Off entrance to Port Phillip Heads, 33 fathoms, sand (Challenger).

Family VERMETIDÆ.

Genus Vermetus, Adanson, 1757.

VERMETUS NOVÆ-HOLLANDIÆ, Rousseau.

Vermetus novæ-hollandiæ, Rousseau. Chenu. Ill. Conch., pl. 1, f. 4a.

1886. Vermetus (Thylacodes) novæ-hollandiæ, Tryon. Man. Conch., vol. viii., p. 179, pl. 53, f. 64.

Hab.—Coast generally.

Obs.—Tryon remarks: "Described by Mörch under the name of V. sulcatus, Lam., but one of the three types of that species is a fossil and different, the other two appear to be the V. sipho, Lam." Accepting this as being correct we quote our shell as above, as it is there figured. In the National Museum, before its removal from the University grounds, our shell was exhibited as V. sulcatus, Lamarck, and as having been obtained at Brighton.

Genus Tenagodes, Guettard (em.), 1770.

TENAGODES AUSTRALIS, Quoy and Gaimard.

1834. Siliquaria australis, Quoy and Gaimard. Astrolabe, vol. iii., p. 302.

1878. Siliquaria australis, Reeve. Conch. Icon., vol. xx., pl. 2, f. 6.

1880. Siliquaria australis, Hutton. Man. N.Z. Moll., p. 86.

1884. Siliquaria australis, Sowerby. Thes. Conch., vol. v., p. 163, pl. 480, f. 7-8.

1886. Siliquaria (Agathirses) australis, Tryon. Man. Conch., vol. viii., p. 189, pl. 58, f. 20.

Hab.—Western Port; Port Phillip; Puebla coast.

TENAGODES WELDII, T. Woods.

1875. Siliquaria weldii, T. Woods. P.R.S. Tas., p. 144.
1886. Siliquaria (Pyxipoma) weldii, Tryon. Man. Conch., vol. viii., p. 191, pl. 58, f. 28.

Hab.—Port Phillip; Western Port.